



UNITED STATES PATENT AND TRADEMARK OFFICE

Cev

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,680	12/06/2004	Lothar Hitzschke	02P09084	6588
24252	7590	03/06/2007		
OSRAM SYLVANIA INC 100 ENDICOTT STREET DANVERS, MA 01923			EXAMINER WILLIAMS, JOSEPH L	
			ART UNIT	PAPER NUMBER
			2879	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/516,680

Applicant(s)

HITZSCHKE ET AL.

Examiner

Joseph L. Williams

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/04, 6/05, 3/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for Producing Gas Discharge Devices at Superatmospheric Pressure.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 7, 12, 13, 14, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the phrase "can be heated" makes the claim limitation optional, and furthermore, it is not clear what is to be included or excluded by the claim.

Appropriate correction is required.

Regarding claim 7, the phrase "if appropriate" makes the claim limitation optional, and furthermore, it is not clear what is to be included or excluded by the claim.

Appropriate correction is required.

Claim 12 recites the limitation "said inert gas" in line 2 of the claim. There is no antecedent basis for this limitation in the claim.

Appropriate correction is required.

Regarding claim 13, it is not clear what gases are to be included or excluded by the phrase "more cost-effective gas".

Appropriate correction is required.

Regarding claim 14, it is not clear what are the metes and bounds of claim. IN particular, it is not clear what is meant by the phrase "in this case".

Appropriate correction is required.

Regarding claim 17, the phrase "can be opened" and "can be applied" makes the claim limitation optional, and furthermore, it is not clear what is to be included or excluded by the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, 7-9, 12, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sudo et al. (US 4,414,460), of record by Applicant.

Regarding claim 1, Sudo ('460) teaches in the lone figure and in column 3, line 24 through column 4, line 24, a method for producing a gas discharge device, in particular a discharge lamp or a plasma display unit, in which a discharge vessel of the gas discharge device is filled with a gas filling and then sealed, characterized in that the filling and sealing of the discharge vessel are performed in a chamber which is purged with the gas filling at superatmospheric pressure (read pressure reduced to atmospheric pressure).

Regarding claim 3, Sudo ('460) teaches that the initial pressure is above atmosphere, which would include the pressure of 10 mbar.

Regarding claim 4, Sudo ('460) teaches the gas outline line (38) is used for purging.

Regarding claim 7, Sudo ('460) teaches the discharge vessel is purged with an inert gas (read Argon).

Regarding claim 8, Sudo ('460) teaches the discharge vessel is filled with a gas filling which contains a buffer gas (read hydrogen or xenon).

Regarding claim 9, Sudo ('460) teaches the discharge vessel is filled with a gas filling which, in addition to the discharge gas provided for the light generation, contains an inert gas with a Penning effect with reference to the discharge gas (read hydrogen or xenon).

Regarding claim 12, Sudo ('460) teaches the inert gas flow is cut off after the sealing of the discharge vessel.

Regarding claim 18, Sudo ('460) teaches the gas discharge device is designed as a discharge lamp for dielectrically impeded discharges.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, 10, 11, 13-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sudo et al. (US 4,414,460), of record, in view of Hitzschke et al. (US 6,837,767).

Regarding claim 2, Sudo ('460) teaches all of the claimed limitations except for the chamber being heated.

Further regarding claim 2, Hitzschke ('767) teaches a method of producing a lamp comprised of, in part, heating the chamber for the purpose of removing adsorbates

Art Unit: 2879

and contaminants of the discharge vessel (see column 2, lines 32-38) and thus improving the lifetime of the discharge vessel.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the heated chamber of Hitzschke in the method of Sudo for the purpose of improving the lifetime of the discharge vessel.

Regarding claim 6, Hitzschke ('767) teaches the discharge vessel is heated in an oxygen-containing atmosphere before the filling.

The reason for combining is the same as for claim 2 above.

Regarding claim 10, Hitzschke ('767) teaches the discharge gas provided from the light generation is Xe, and the discharge vessel is filled with a partial pressure of Xe such that at room temperature it includes an Xe partial pressure in the range of 60-350 mbar.

The reason for combining is the same as for claim 2 above.

Regarding claim 11, Hitzschke ('767) teaches an inert gas freezer or collector is connected to the chamber.

The reason for combining is the same as for claim 2 above.

Regarding claim 13, Hitzschke ('767) teaches a switchover is made to a more cost-effective gas after the sealing of the discharge vessel.

The reason for combining is the same as for claim 2 above.

Regarding claim 14, Hitzschke ('767) teaches the gas filling containing the discharge gas provided for the light generation and, if appropriate, gases to be introduced thereafter into the chamber flow in at a temperature which corresponds substantially to the discharge vessel temperature present in this case.

The reason for combining is the same as for claim 2 above.

Regarding claim 15, Hitzschke ('767) teaches the chamber (i0) has at least for the most part wall thicknesses of not more than 8 mm.

The reason for combining is the same as for claim 2 above.

Regarding claim 16, Hitzschke ('767) teaches the discharge vessel is heated, purged, filled and sealed in one and the same chamber.

The reason for combining is the same as for claim 2 above.

Regarding claim 17, Hitzschke ('767) teaches the chamber can be opened by separating two chamber parts and a pressure force can be applied to a bearing surface between the two chamber parts via a vacuum channel.

The reason for combining is the same as for claim 2 above.

Regarding claim 19, Hitzschke ('767) teaches the gas discharge device is a flat radiator or a plasma display unit with a discharge vessel which has two substantially plane-parallel discharge vessel plates.

The reason for combining is the same as for claim 2 above.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sudo et al. (US 4,414,460), of record, in view of Hitzschke et al. (US 6,837,767) as applied to claim 2 above, and further in view of Schleimann-Jensen (US 4,383,723).

Regarding claim 5, Sudo et al. (US 4,414,460), of record, in view of Hitzschke et al. (US 6,837,767) teaches all of the claimed limitations except for the chamber being cooled by water.

Further regarding claim 5, Schleimann-Jensen ('723) teaches in column 2, lines 40-59, that water is used to cool the chamber for the purpose of quickly cooling the chamber to allow the processing cycle to start.


Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cooling water of Schleimann-Jensen in the method of Sudo and Hitzschke for the purpose of quickly cooling the chamber to allow the processing cycle to start.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Joseph L. Williams
Primary Examiner
Art Unit 2879